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BULLETIN OF BUSINESS RESEARCH

COLLEGE OF COMMERCE AND JOURNALISM
THE OHIO STATE UNIVERSITY

Volume I | NOVEMBER 15, 1926 | No. 10

CONTENTS

	Page
The Course of Business in Ohio Cities	3
Employment in Ohio Cities	3
Sales of Automobiles in Ohio	6
Index of Employment in the Ohio Steel Works and Rolling Mills	6
Index of Employment in the Blast Furnaces in Ohio	8
An Iron and Steel Group Employment Index	8
The Trend of Business and a Review of the Forecasts	10
Business Statistics Section of Ohio Conference	16
The Distribution of Mortgage Loans in Ohio	17
Labor Force Reduction in Time of Depression	18
Book Reviews	19
Bureau Publications	21
Convention Calendar	22

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BULLETIN OF BUSINESS RESEARCH

Volume 1 NOVEMBER 15, 1926 No. 10

THE COURSE OF BUSINESS IN THE CITIES OF OHIO

Bank Debits

Bank debits in Ohio registered an increase in October after allowance was made for normal seasonal variation. In six of the eight cities for which the data are shown in Chart I the October figures show a gain over September. Springfield and Toledo show declines, the decline being especially severe in Toledo. However, it must be remembered that Toledo has been consistently above the state level for the last three years with the exception of one month. The greatest October increases occurred in Cleveland, Columbus, and Cincinnati. It will be noted from Chart I that the State of Ohio curve reached a level in October which has been exceeded only twice in the last three years.

Construction Contracts Awarded

Construction contracts awarded in Ohio in October show a continuation of the decline of the last three months. All the cities except Akron and Columbus reflect this decline. (See Chart II.)

EMPLOYMENT IN OHIO CITIES

The Construction Industry

The October employment reports from general contractors in Ohio show a decrease of 10.6 per cent from September in number of wage earners employed and a decrease of 10.3 per cent from September in wage payments. The seasonally corrected curve indicates that construction employment in October was only 85.3 per cent of the seasonal normal. Compared with October 1925 Ohio construction employment shows a decrease of 14.0 per cent. The average monthly employment for the first ten months of 1926 showsa decrease of 6.9 per cent from the same period of 1925.

The October indices for individual cities show five increases and two decreases compared with the previous October. (See Table I.) Dayton continues to show the greatest increase and Canton still shows the greatest decrease. October employment in the Ohio construction industry normally shows about a 3 per cent drop from September.

TABLE II
EMPLOYMENT IN THE CONSTRUCTION INDUSTRY IN OHIO
January to October 1926
In Each Series Average Month 1923 Equals 100

Month	Number of Wage Earners		Total Wage Payments
	Actual	Corrected for Seasonal Variation	
January	76.0	108.1	86.6
February	74.3	110.4	82.3
March	63.8	85.2	70.3
April	70.9	77.5	84.9
May	82.0	82.7	102.3
June	99.9	89.8	126.8
July	108.1	90.9	141.5
August	108.1	89.5	144.0
September	113.3	93.1	155.6
October	101.3	85.3	139.6

The Ohio construction employment curves for 1926 are shown in Chart III and the corresponding index numbers are listed in Table II. The indices for individual cities are listed in Table I.

Employment in the Iron and Steel Industry in Ohio

Beginning with this issue the Bureau discontinues the charts showing employment changes in the three individual divisions of the iron and steel industry. In their place there will be shown each month a single chart (Chart IV) showing employment changes in the iron and steel industry as a group. This index is based on the three divisions for which data have been published in the past. The composition of this index is described in detail in this number

TABLE I
INDICES OF EMPLOYMENT IN THE OHIO CONSTRUCTION INDUSTRY
In Each Series Average Month 1923 Equals 100

City	No. of Reporting Firms 1926	Total Wage Payments September 1926	Number of Wage Earners					
			October			Average Month Jan.-October		
			1926	1925	Per Cent Increase*	1926	1925	Per Cent Increase*
Akron	18	168.1	125.7	184.6	−31.9	122.8	119.3	3.0
Canton	10	50.7	38.3	91.2	−58.0	44.6	97.6	−54.3
Cleveland	22	129.8	95.7	111.1	−13.9	71.8	98.5	−27.0
Columbus	10	120.6	124.1	102.0	21.7	115.2	82.8	39.1
Dayton	8	344.8	254.3	81.4	212.5	142.2	61.8	130.3
Toledo	8	104.9	81.9	82.0	− 0.1	85.7	66.1	29.6
Youngstown	5	61.2	72.0	107.1	−23.8	113.7	76.8	48.0
All State	103	139.6	101.3	117.9	−14.0	89.8	96.2	− 6.7

*Minus (−) indicates per cent decrease.

CHART I

BANK DEBITS IN OHIO CITIES

January 1924 to Date

Corrected for Seasonal Variation

Average Month 1920-1924 Equals 100

Source: Federal Reserve Board

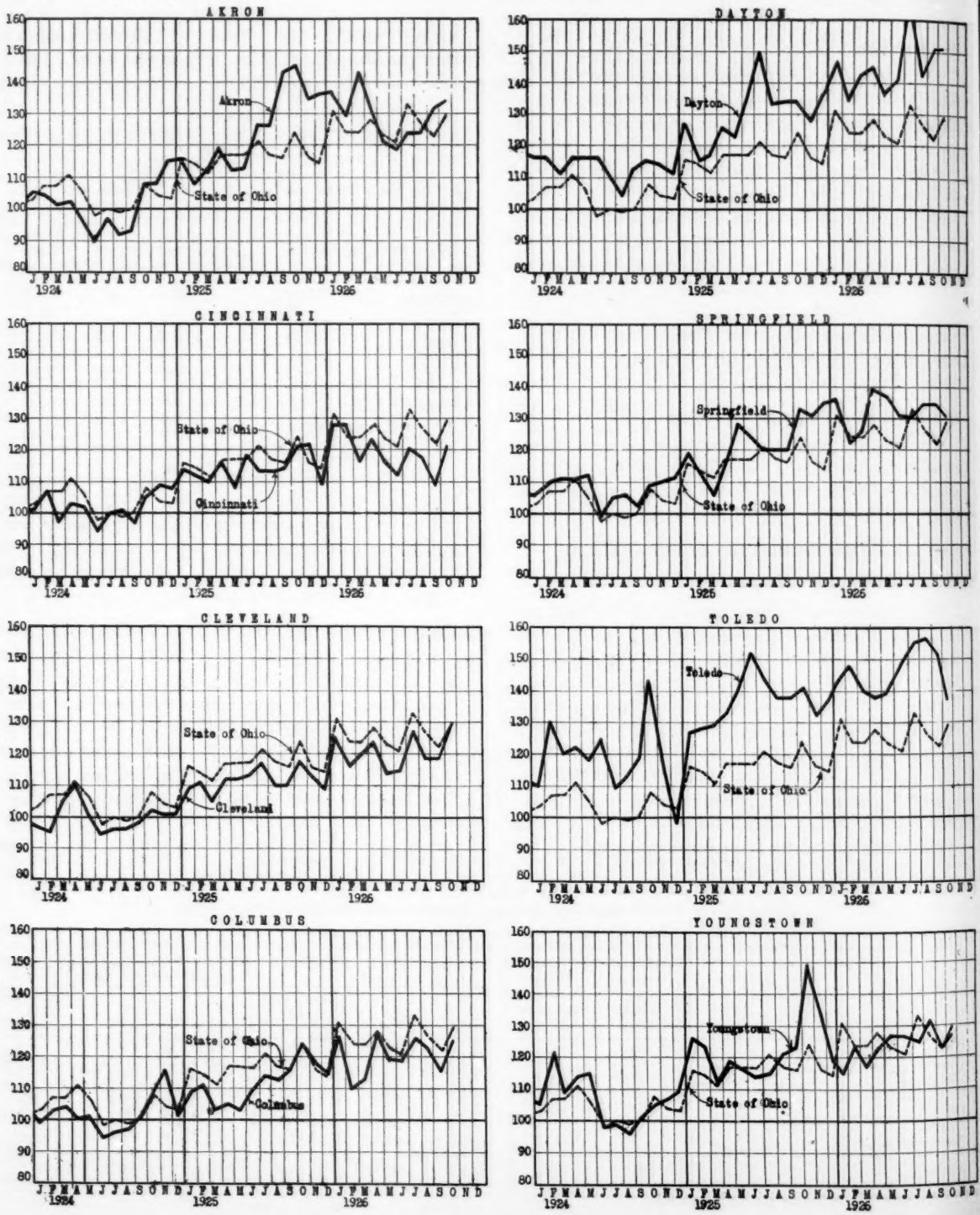
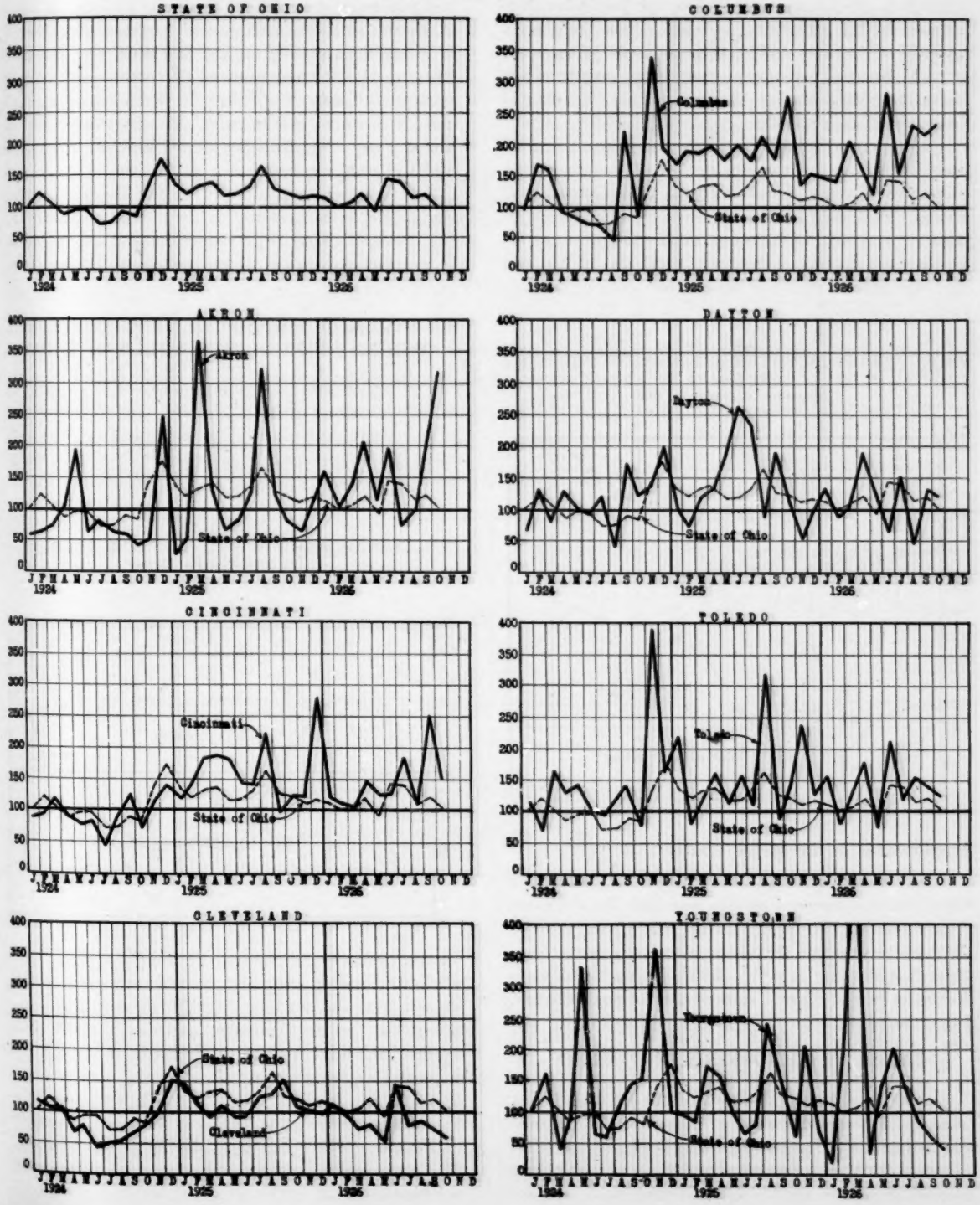


CHART II
CONSTRUCTION CONTRACTS AWARDED IN OHIO
January 1924 to Date

Corrected for Normal Seasonal Variation*

Average Month 1920-1924 Equals 100 Source: F. W. Dodge Corporation

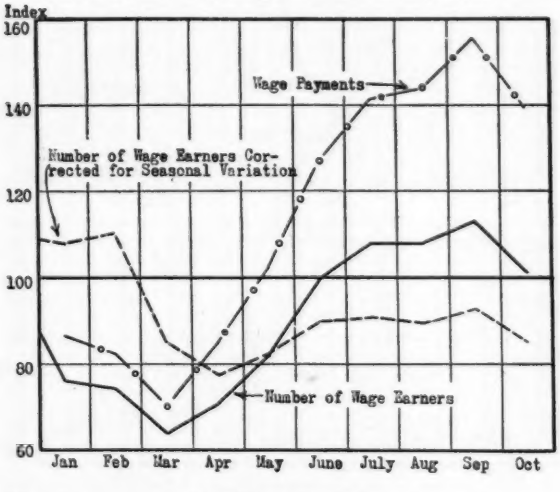
*All Series are Corrected by the State Index of Seasonal variation.



on page 9. The reason for this change is that advance reports are sent to the cooperating firms during the first week of each month in which the charts for the individual divisions are presented. The cooperating firms are, of course, interested in the particular division of the industry, but it is believed that the general index for the iron and steel group will be of more general interest. However, the index numbers for these three divisions are shown in Table III and will be repeated each month.

Reference to Table III shows that the number of wage earners in the iron and steel group remained substantially constant from September to October, although total wage payments showed an increase of about 4 per cent. Only very small changes were recorded in October in the three divisions of the iron and steel industry as will be apparent on an examination of Table III.

CHART III
EMPLOYMENT IN THE CONSTRUCTION INDUSTRY IN OHIO
January to October 1926
In Each Series Average Month 1923 Equals 100



Employment in the Metal Trades

The employment changes in the metal trades in five Ohio cities as reported by the National Metal Trades Association are shown in Table IV and Chart V. For the state there was a decline of five points in October. Columbus was the only city showing a noticeable gain (seven points). Toledo showed the largest decrease, from 104 to 89.

SALES OF AUTOMOBILES IN OHIO

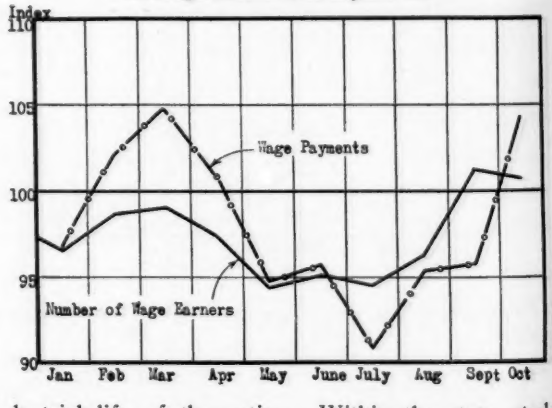
Sales of automobiles in 51 of the 88 counties of Ohio in October are shown in Table V. The percentage change from September is also shown in the table. These 51 counties represent about three-fourths of the population of the state. The October sales of passenger cars in these 51 counties show a decrease from September of 15.3 per cent. Sales of commercial cars show a corresponding drop of 3.7 per cent. The Bureau hopes to be able to make comparisons with the preceding year before the next Bulletin appears. The drop in sales in October is perhaps of considerable significance. During the last three years General Motors sales to users showed decreases in October in comparison with September in two years, 1923 and 1924, and an increase in 1925. The 1923 decrease was about 3 per cent, the 1924 decrease about 5 per cent and the 1925 increase about 3 per cent.

These figures are supplied to the Bureau through the courteous cooperation of the Clerks of Courts of the counties concerned. An effort is being made to secure the cooperation of the remaining clerks of the state.

AN INDEX OF EMPLOYMENT IN THE STEEL WORKS AND ROLLING MILLS OF OHIO

The steel works and rolling mills of Ohio constitute a very important industry, basic to the industrial life of the State, and since Ohio ranks next to Pennsylvania as a steel producing state, it is reasonable to say that the steel industry of Ohio is basic to the industrial life of the nation. Within the state, steel works and rolling mills are second in importance only to foundries and machine shops, as measured by number of wage earners employed and total payroll. The average monthly number of industrial wage earners employed by the steel works and rolling mills of Ohio in 1923, the base year for the employment series to be described below, was 70,849. The average number of clerical workers employed was in excess of 4,000. The total payroll of this industry in the same year amounted to $141,274,675.

CHART IV
EMPLOYMENT IN THE IRON AND STEEL INDUSTRIES IN OHIO
January to October 1926
Average Month 1923 Equals 100



Composition of the Index

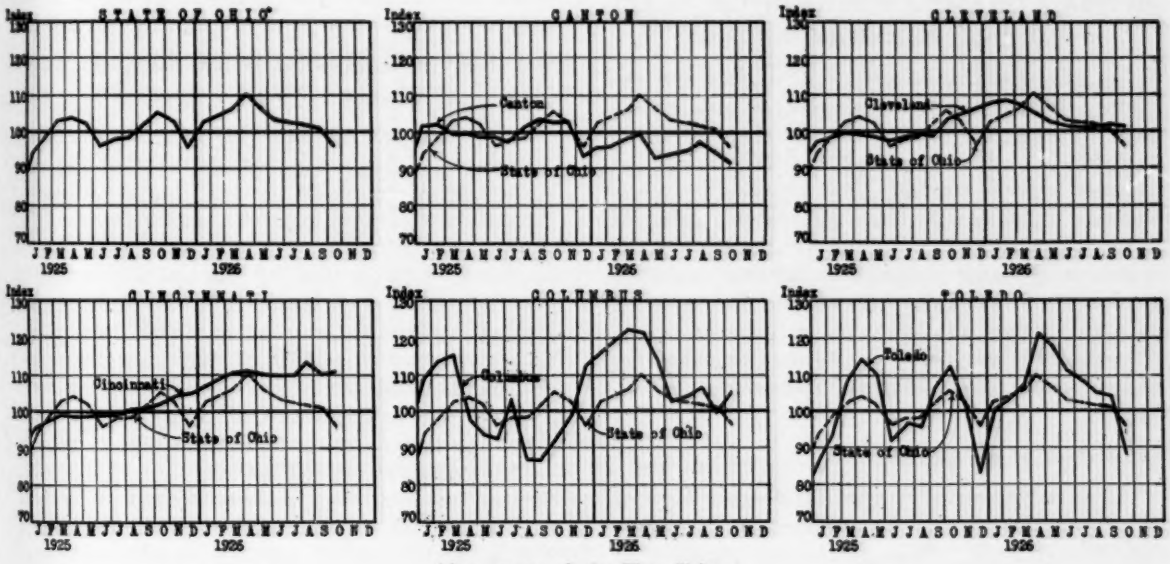
The index of employment in steel works and rolling mills of Ohio presented below, is based on the data of 36 identical concerns for the period January, 1922, through December, 1925. These totals were secured from the files of the Ohio Division of Labor Statistics, as outlined in the earlier section dealing with foundries and machine shops. The 1926 indices are based on the current reports of 15 of these 33 concerns. The manner of splicing onto the more complete record of 1925 is described in the October Bulletin.

The Size of the Sample

The 36 concerns whose data are included for the years 1922 through 1925 employed in 1923 an average monthly number of 63,143 wage earners. This amounted to 89.1 per cent of the average monthly number of wage earners employed by all steel works and rolling mills reporting to the Ohio Division of Labor Statistics. It is unnecessary to emphasize the representative character of such an index. For the first six months of 1926 the average monthly number of wage earners employed by the 15 cooperating con-

CHART V
EMPLOYMENT IN THE METAL TRADES IN OHIO
January 1925 to July 1926

Average Month 1925 Equals 100 Source: National Metals Trades Association



*Aggregate of the Five Cities

TABLE III
EMPLOYMENT IN THE IRON AND STEEL INDUSTRIES IN OHIO
January to October 1926
In Each Series Average Month 1923 Equals 100

Industry	No. of Reporting Firms	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.
Iron and Steel Group											
Total Wage Payments	81	96.7	102.0	104.7	100.8	94.7	95.7	94.9	95.4	99.6	103.8
Number of Wage Earners	81	96.5	98.6	99.1	97.3	94.4	95.1	94.5	96.4	101.9	101.3
Blast Furnaces											
Total Wage Payments	7	102.0	100.4	103.7	102.6	104.1	108.6	109.8	107.6	95.0	99.0
Number of Wage Earners	7	102.0	100.2	100.7	102.7	103.5	110.8	110.1	104.4	101.4	103.0
Steel Work and Rolling Mills											
Total Wage Payments	13	104.2	105.3	108.0	102.6	91.9	97.3	94.0	95.2	101.2	109.3
Number of Wage Earners	13	105.7	106.3	104.8	102.8	98.0	99.7	100.4	106.6	109.9	110.6
Foundries and Machine Shops											
Total Wage Payments	61	91.9	100.2	102.8	99.6	95.6	93.6	87.3	94.6	92.7	101.8
Number of Wage Earners											
State of Ohio	61	90.7	94.0	95.6	93.7	91.5	91.1	89.8	89.7	96.2	94.8
Cleveland District	15	93.2	97.2	98.8	94.5	91.0	93.9	89.9	92.6	108.1	104.5
Northeastern District (exclusive of Cleveland)	20	76.4	81.6	82.6	83.1	81.9	80.7	81.6	83.9	85.7	85.5
Northwestern District	9	107.4	109.9	110.3	111.6	110.7	109.3	109.4	102.7	107.4	107.4
Southern District	17	91.5	117.9	121.9	118.1	115.7	110.3	109.7	107.9	109.6	108.3

cerns was 21,871. This amounts to 30.9 per cent of the average monthly number of wage earners employed in the base year, 1923, by all steel works and rolling mills reporting to the Ohio Division of Labor Statistics. Such a sample is sufficiently adequate that the results should be representative.

The Employment Index

The indices representing the fluctuations of employment in steel works and rolling mills of Ohio are listed in Table VI and are plotted in Chart VII. The chart does not disclose any distinct seasonal movement. There does seem to be a mid-year slump, but the period is too short to be conclusive. This will be treated in a separate section dealing with seasonal movements.

AN INDEX OF EMPLOYMENT IN THE BLAST FURNACE INDUSTRY IN OHIO

The Blast Furnace industry in Ohio does not constitute a large industry but it is one of basic importance. The average monthly number of wage earners employed in 1923 by the thirty-three blast furnaces of the state reporting to the Ohio Division of Labor Statistics was 12,498 and the total payroll disbursed in the same year amounted to $27,103,899. These figures are not large in themselves but when the basic position of this industry to the iron and steel group is considered the industry looms as a very important one. The entire iron and steel group in 1923 accounted for 26.8 per cent of the total payrolls reported by all industries.

The Extent of the Sample

The index of employment in the blast furnaces of Ohio is based on the data of 17 concerns for the period 1922 through 1925. These 17 concerns employed in the base year, 1923, an average monthly number of wage earners of 5,239. This amounts to 41.9 per cent of the similar number employed by all the thirty-three blast furnaces in Ohio reporting to the Ohio Division of Labor Statistics. For the months of 1926 the data of only seven of these 17 concerns have been secured. For the first six months of 1926 these seven concerns employed an average monthly number of 984 wage earners. This sample is only 7.9 per cent of the 1923 base number. It is recognized that this 1926 sample may not be large enough to be representative. This can be tested when the complete 1926 data become available early in 1927. In the meantime, the Bureau is attempting to enlarge the list of cooperating firms.

The Employment Index

The employment indices for this industry are listed in Table VII and are plotted in Chart VIII. There is no distinct seasonal movement apparent in the curve. The curve does, however, reveal rather serious fluctuations in periods of uncertainty in the business outlook. This is evident in 1923 and 1924 and in the early part of 1926.

AN IRON AND STEEL GROUP EMPLOYMENT INDEX

It was pointed out above in connection with the discussion of the blast furnace index that the iron and steel group in Ohio accounted for 26.8 per cent of the total payroll of all industries reporting to the Ohio Division of Labor Statistics in 1923. It is obvious from this statement that the iron and steel group in Ohio exercises a dominant influence on industrial purchasing power in the state. For this reason it is desirable to compute an index of employment to represent the iron and steel group. Fortunately, the three iron and steel series already described constitute the greater portion of the entire iron and steel group. In 1923 the combined payroll of these three divisions of the iron and steel group amounted to 77.7 per cent of the total payroll of the entire iron and steel group. This percentage figure is sufficient to indicate the representative character of the three divisions of the group. As conclusive proof of this relationship, Chart IX is presented. On this scatter diagram the monthly link relatives of the total employment in the three chief divisions of the iron and steel group are plotted against the similar concurrent link relatives of employment in

TABLE IV
EMPLOYMENT IN THE METAL TRADES IN OHIO
January to October 1926
Average Month 1925 Equals 100
Source: National Metal Trades Association

City	Number of Reporting Firms	Index of Employment									
		Jan. 1926	Feb. 1926	Mar. 1926	Apr. 1926	May 1926	June 1926	July 1926	Aug. 1926	Sept. 1926	Oct. 1926
Canton	68	96	96	98	100	93	94	95	97	94	92
Cleveland	42	108	109	107	105	103	101	101	101	102	101
Cincinnati	34	108	110	112	112	111	110	110	113	110	111
Columbus	19	116	119	122	121	114	103	95	107	99	106
Toledo	51	100	103	108	121	118	111	108	105	104	89
State*	214	103	104	106	110	106	103	102	102	101	96

*Aggregate of the five cities.

the entire iron and steel group. The link relatives are based on the period 1914-1924, with the exception of 1922, for which year the entire group record is not available. The January-December relatives are not plotted because the data are not strictly comparable from year to year. It is evident from the scatter diagram that the fluctuations of two series are uniform and synchronous.

The Iron and Steel Index

The fluctuations of employment in the iron and steel group of industries in Ohio are represented in the indices listed in Table VIII and plotted in Chart X. These indices are weighted averages of the indices of employment in the three divisions of the iron and steel group, which indices have already been presented. The weights used were arrived at by comparing the average monthly number of wage earners employed by each of the three divisions in the period 1914-1924 (the 1922 data are not included, not being available). The ratio of each average number to the average number of the group is the weight assigned to the particular industry. These ratios are: Foundry and Machine Shops, 58.1 per cent; Steel Works and Rolling Mills, 37.1 per cent; Blast Furnaces, 4.8 per cent. For convenience, the weights used were, respectively, 60, 35, and 5.

TABLE VI
INDEX OF EMPLOYMENT IN OHIO STEEL WORKS AND ROLLING MILLS—SINCE JANUARY 1922
Average Month 1923 Equals 100

Month	Index				
	1922	1923	1924	1925	1926
January	65.3	95.7	107.4	108.6	105.7
February	72.4	95.8	111.1	105.7	106.3
March	81.3	101.1	111.4	105.7	104.8
April	84.1	95.4	106.7	102.4	102.8
May	87.0	100.3	94.4	101.9	98.0
June	90.0	103.9	77.7	98.5	99.7
July	90.1	95.2	83.8	101.8	100.4
August	89.9	100.3	90.6	100.8	106.6
September	88.5	101.4	91.1	103.9	109.9
October	92.8	104.4	92.3	106.3	110.6
November	96.0	104.1	89.8	106.3	
December	97.0	102.4	99.8	107.8	

TABLE VII
INDEX OF EMPLOYMENT IN OHIO BLAST FURNACES SINCE JANUARY 1922
Average Month 1923 Equals 100

Month	Index				
	1922	1923	1924	1925	1926
January	56.7	89.6	113.9	114.8	102.0
February	63.8	90.5	123.5	111.1	100.2
March	65.9	92.6	124.3	110.9	100.7
April	65.6	92.1	119.1	106.2	102.7
May	79.2	97.2	111.0	105.8	103.5
June	90.5	100.3	101.5	103.7	110.8
July	88.5	101.7	105.8	103.3	110.1
August	82.2	104.7	107.6	103.3	104.4
September	85.8	107.0	104.5	102.4	101.4
October	96.4	108.1	110.9	106.5	103.0
November	108.6	108.2	108.4	108.0	
December	112.7	108.1	110.7	104.6	

TABLE V
REGISTRATION OF BILLS OF SALE IN OHIO COUNTIES, OCTOBER 1926

County	County Seat	Passenger Cars		Commercial Cars		County	County Seat	Passenger Cars		Commercial Cars	
		Number	Per Cent Increase Over Previous Mo.	Number	Per Cent Increase Over Previous Mo.			Number	Per Cent Increase Over Previous Mo.	Number	Per Cent Increase Over Previous Mo.
Adams	West Union	46	9.5	8	300.0	Licking	Newark	121	−25.8	22	46.7
Allen	Lima	165	−18.7	4	−71.4	Lorain	Elyria	242	−17.7	22	− 8.3
Ashtabula	Jefferson	229		33		Mahoning	Youngstown	347	−42.5	59	9.3
Athens	Athens	91	0.0	9	−42.9	Medina	Medina	81	1.3	9	−10.0
Belmont	St. Clairsville	112		20		Meigs	Pomeroy	78	− 8.2	13	62.5
Brown	Georgetown	18	−51.4	6	20.0	Miami	Troy	158	8.2	9	−25.0
Butler	Hamilton	120		21		Monroe	Woodsfield	28	7.7	3	50.0
Carroll	Carrollton	30	−14.3	4	−33.3	Montgomery	Dayton	590	−30.6	96	−18.6
Champaign	Urbana	62	−18.4	2	−66.7	Morrow	Mt. Gilead	28	−24.3	3	50.0
Cuyahoga	Cleveland	2,278	−15.2	264		Muskingum	Zanesville	155	−21.7	7	
Darke	Greenville	87	−23.7	8	−27.3	Ottawa	Pt. Clinton	88	− 8.3	6	−40.0
Defiance	Defiance	75	− 7.4	5	150.0	Paulding	Paulding	38		2	
Fairfield	Lancaster	128	−12.3	13	85.7	Perry	N. Lexington	79	14.5	7	250.0
Fayette	Wash. C. H.	67	− 2.9	7	0.0	Pickaway	Circleville	49	−31.9	4	−76.5
Franklin	Columbus	1,115	− 6.2	0	0.0	Putnam	Ottawa	48	−54.3	8	−20.0
Fulton	Wauseon	129	−24.6	5	−37.5	Ross	Chillicothe	121	4.3	14	−30.0
Geauga	Chardon	12	−45.5	2	100.0	Scioto	Portsmouth	176		17	
Guernsey	Cambridge	90	11.7	8	166.7	Shelby	Sidney	57	−26.0	6	0.0
Hamilton	Cincinnati	1,117	−14.1	170		Stark	Canton	438		58	
Henry	Napoleon	83	3.8	4	−20.0	Summit	Akron	663		91	
Highland	Hillsboro	67	− 4.3	9	0.0	Trumbull	Warren	259		32	
Hocking	Logan	42	− 8.7	4	−20.0	Union	Marysville	66	− 8.3	0	
Huron	Norwalk	142	− 4.1	7	0.0	Wayne	Wooster	126	−18.7	25	38.9
Jefferson	Steubenville	148		15		Williams	Bryan	101		5	
Lake	Painesville	134	− 1.5	26	85.7	Wyandot	U. Sandusky	68	− 8.1	4	−55.6
Lawrence	Ironton	49	−34.7	13	− 7.2	Total of Comparable Counties.		9,341	−15.3	460	− 3.6

THE TREND OF BUSINESS AND A REVIEW OF THE FORECASTS

Stock Market

The net declines in the prices of industrials and rails for October were large notwithstanding the recoveries shown after the middle of the month. The industrials showed the largest declines and of the industrials the most conspicuous were the automobile and auto accessory stocks. The automobile securities advanced rapidly during the summer under the leadership of General Motors; the October declines represent the failure of the automobile sales and automobile earnings for the past month to measure up to the anticipations of the trade during the summer and early fall months. There has been no striking decline in the industrial situation as measured by employment and volume of trade. A satisfactory volume of retail trade and continued moderate activity in iron and steel characterizes the current situation.

There has been little change in the average of wholesale prices and the volume of trade has continued at about the levels which may be expected at this season of the year. However, there is no evidence of an industrial boom during the fourth quarter. The tendency bids fair to be slightly downward as compared with a normal seasonal upward trend.

The money market shows no signs of distress and call rates have been a little lower as a result of the liquidation in the stock market. The changes during the month in the various groups of stock are shown in Table IX.

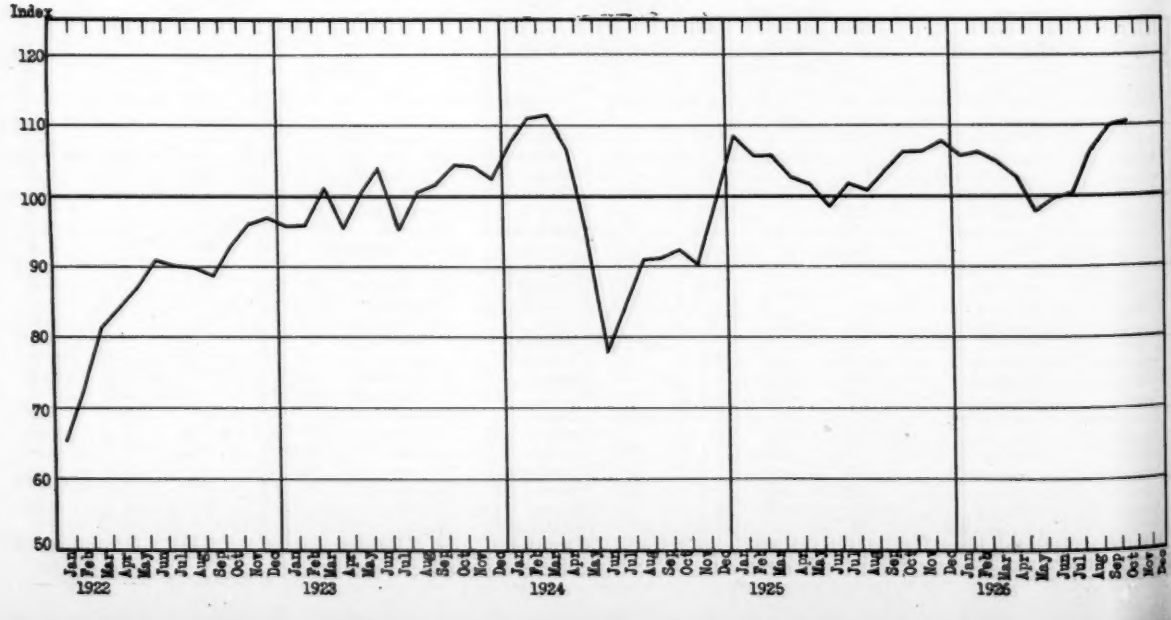
TABLE VIII
EMPLOYMENT INDEX OF THE OHIO IRON AND STEEL INDUSTRIES—JANUARY 1922 TO DATE
Average Month 1923 Equals 100

Month	Totals				
	1922	1923	1924	1925	1926
January	58.3	94.2	98.3	94.5	96.5
February	62.6	96.6	102.0	93.9	98.6
March	67.6	100.6	102.4	94.5	99.1
April	70.6	99.4	98.3	93.1	97.3
May	76.3	102.4	91.6	93.3	94.4
June	81.5	105.2	82.4	91.8	95.1
July	83.5	102.6	82.3	93.1	94.5
August	85.3	103.6	83.3	92.2	96.4
September	85.3	101.6	83.1	94.6	101.3
October	88.8	99.9	83.8	96.6	100.7
November	91.9	97.7	83.1	96.3	
December	94.1	96.3	88.6	98.0	

Banking and Credit Conditions

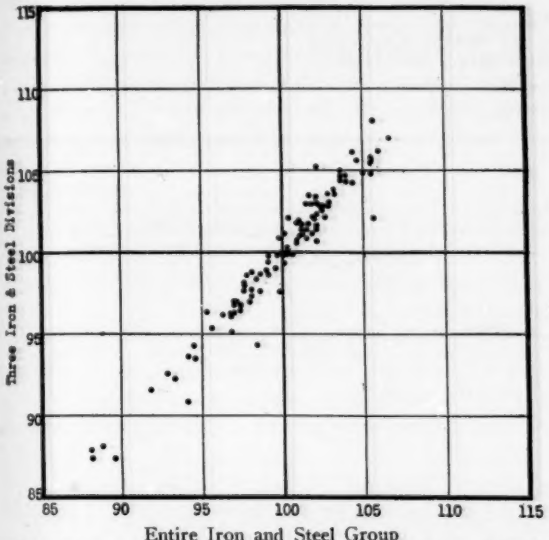
In the month of September bank debits fell below the normal seasonal movement. While there was an upward movement in bank debits during the month of October, the total volume has varied but little from the usual seasonal movement for that month. There has been during the entire year an up-and-down movement in bank debits resulting in a comparatively horizontal trend. (See Chart I.)

CHART VII
INDEX OF EMPLOYMENT OF WAGE EARNERS STEEL WORKS AND ROLLING MILLS IN OHIO
Since January 1922
Average Month 1923 Equals 100



There was some decrease in the volume of bills discounted by the Federal Reserve Banks. The loans to brokers decreased by about 70 million dollars as a result of liquidation in the stock market during the month. The ratio of total reserves for the Federal Reserve Banks increased slightly during the month and was about 73.5 per cent at the first of November. Sixty and ninety day paper during the month was around 4¾ per cent and time money near the end of October could be had at 4½ per cent. These rates are somewhat higher than those prevailing at the same period in 1925. They do not denote a money stringency and yet at the same time they show a comparatively full utilization of current loan funds.

CHART IX
SCATTER DIAGRAM OF EMPLOYMENT LINK RELATIVES
Entire Iron and Steel Groups and Total of Three Iron and Steel Divisions*
1914-1924**
Source: Ohio Division of Labor Statistics



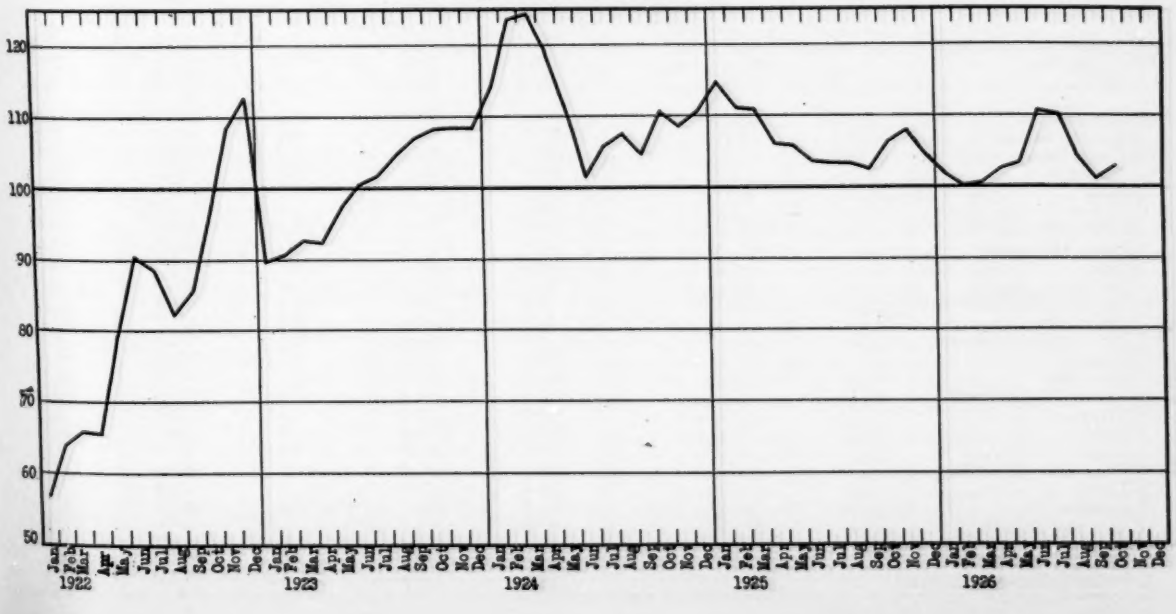
*Foundries and Machine Shops, Steel Works and Rolling Mills and Blast Furnaces.
**December-January Relatives not Plotted; See Text

Iron and Steel

The rise in the price of coal during October caused an increased activity in the production and sale of pig iron. The present activity in coal arises mainly from the export demand. It is entirely possible that foreign requirements will be reduced at an early date through the settlement of the English coal strike which is believed to be approaching an end. The average daily production of pig iron during October was 107,134 tons as compared with 105,442 tons in September. The excess of production in October over the same month of 1925 was about 10,000 tons. The average of Blast Furnaces in operation as shown by the Iron Trade Review was 58.5 per cent as compared with 58.2 per cent in September.

There was no change during the month in the price of heavy steel scrap and only a slight rise in the price of No. 1 cast scrap, the price at the end of the month being $17.00 per ton at Chicago.

CHART VIII
INDEX OF EMPLOYMENT OF WAGE EARNERS
BLAST FURNACES OF OHIO
Since January 1922
Average Month 1923 Equals 100



The composite price of pig iron increased from $19.63 the first week in October to $20.04 per ton at the first of November. The composite price of steel, according to the Iron Age, remained at 2.453 cents per pound during the last three weeks of October, the price during the first week of October being 2.439 cents per pound.

The demand for steel showed some decline toward the end of the month, although the activity in pig iron continued.

Automobiles

The automobile production in the United States and Canada for September was 362,673 cars as compared with the August figure of 391,861 cars. While this exceeds the September figure for 1925, the seasonal

CHART X
INDEX OF EMPLOYMENT OF WAGE EARNERS
IRON AND STEEL INDUSTRIES IN OHIO
Since January 1922
Average Month 1923 Equals 100

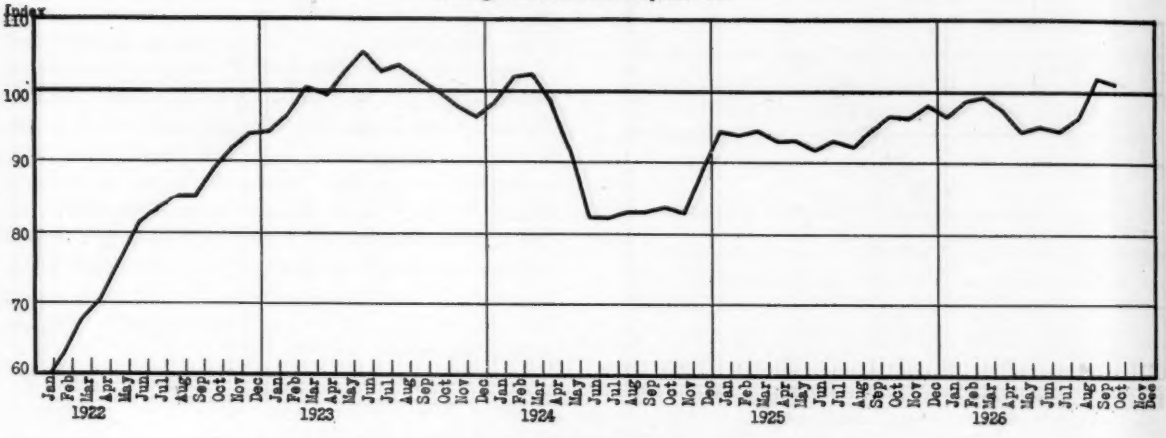


TABLE IX
STANDARD INDICES OF THE SECURITY MARKETS
COMMON STOCK PRICES—BY GROUPS
Source: Standard Statistics Company, Inc.

Group	Oct. 2	Oct. 30	Net Increase*	1926 Range	
				High	Low
230 Stocks	153.4	147.7	− 5.7	153.4	130.0
199 Industrials	162.2	154.6	− 7.6	162.2	135.6
31 Rails	132.0	130.8	− 1.2	136.8	116.5
10 Automobiles	247.8	219.6	−28.2	247.8	140.2
8 Auto Accessory	425.5	376.5	−49.0	425.5	227.0
11 Chain Stores	405.5	393.8	−11.7	530.9	342.8
7 Chemical	184.1	169.4	−14.7	187.3	146.5
3 Coal	66.8	79.1	−12.3	79.1	64.2
11 Copper	114.4	112.1	− 2.3	114.8	99.6
3 Electric Equipment	265.5	249.0	−16.5	281.9	223.4
3 Farm Machinery	143.3	133.9	− 9.4	143.3	121.9
9 Food	306.1	299.4	− 6.7	306.1	254.6
5 Leather & Shoe	58.3	57.6	− .7	71.5	55.1
5 Machine Manufacturing	94.6	89.3	− 5.3	106.8	87.2
3 Mail Order	183.9	179.4	− 4.5	208.2	153.7
12 Metals (Miscellaneous)	117.9	114.2	− 3.7	130.6	105.5
3 Paper	78.9	69.7	− 9.2	95.4	61.3
17 Petroleum	111.2	109.5	− 1.7	117.7	105.1
10 Railroad Equipment	171.4	165.0	− 6.4	175.4	149.6
3 Shipping	23.7	24.2	+ .5	32.9	21.7
9 Steel	122.5	110.6	−11.9	124.1	95.8
6 Sugar	63.9	60.4	− 3.5	71.4	56.5
5 Telegraph and Cable	158.5	157.8	− .7	160.5	148.3
5 Textile	38.4	38.5	+ .1	48.2	33.2
3 Theatres	163.9	156.1	− 7.8	163.9	139.3
7 Tire and Rubber	47.8	47.3	− .5	69.5	42.9
7 Tobacco	164.6	163.0	− 1.6	166.3	149.9
16 Traction, Gas & Power	223.6	215.8	− 7.8	227.1	190.4
18 Miscellaneous (Industrials)	216.4	203.2	−13.2	217.4	176.7

*Minus (—) indicates net decrease.

trend is downward as compared with August, whereas in 1925 the seasonal trend was steadily upward from August through October. (See Table X and Chart XI.)

The figures on automobile sales in the several counties of Ohio as shown on page 9 indicate a decline in sales as compared with the sales of the preceding month. The sales figures of General Motors in 1925 show that the sales for October were materially in excess of those for September; in fact, from July to October the sales were increasing steadily.

The sales of automobiles in the Philadelphia Federal Reserve District shown in Table XI show an increase in September over August.

Construction

The value of contracts awarded for October 1926 in thirty-seven eastern states showed a decline of 3 per cent as compared with the contracts for October 1925. (See Table XII.) This indicates a continuation of the tendency since June to show a somewhat smaller volume of building contracts than for the preceding year. The decline from month to month, however, has been somewhat less than that which appeared in the spring of 1926.

The volume of contracts for the several districts of the United States shows greatest activity in the middle Atlantic states and the central western states. In the latter the total for ten months is 10 per cent in excess of that for the corresponding period in 1925, and in the middle Atlantic the total is 14 per cent in excess for that of the first ten months of 1925. The state of Texas shows a large increase over the preceding year for the first ten months of 1925. There is a declining tendency in New York, New Jersey, in the New England states, in the Pittsburgh district, and in the southeastern states. (See Table XIII.)

Domestic Trade

The Bureau's index of dry goods sales in Ohio shows an increase of 11 points in September over August and 6.7 points of September 1926 over September 1925. While this figure represents an approximately normal seasonal movement of retail trade, the increase was less notable than that of September 1925 compared with August of the same year.

Retail trade of 1925 was affected by the booming tendency in the building and manufacturing industries and a more normal situation obtaining in 1926 is

TABLE X
PASSENGER AUTOMOBILE PRODUCTION IN THE UNITED STATES AND CANADA, AND GENERAL MOTOR SALES
January 1925 to Date by Months
Sources: U. S. Department of Commerce*; Commercial and Financial Chronicle

Month	U. S. and Canada		General Motors Company			
			Dealers' Sales to Users		Division Sales to Dealers	
	Total Number of Cars	Per Cent Increase Over Same Period last Year **	Total Number of Cars	Per Cent Increase Over Same Period last Year **	Total Number of Cars	Per Cent Increase Over Same Period last Year **
1925						
January	213,851	– 27.2	25,593	– 23.8	30,642	– 50.1
February	253,955	– 26.1	39,579	– 20.9	49,146	– 38.3
March	334,214	– 6.4	70,594	23.4	75,527	1.4
April	393,262	13.5	97,242	8.5	85,583	46.0
May	384,548	34.3	87,448	3.2	77,223	68.0
June	366,510	62.8	75,864	16.3	71,088	115.5
July	360,124	47.3	65,872	8.3	57,340	41.4
August	223,517	– 12.4	78,638	43.4	76,462	57.7
September	274,227	4.1	83,519	72.0	89,018	71.3
October	408,017	56.4	86,339	87.7	95,703	93.1
November	337,435	65.1	60,371	82.4	73,624	211.6
December	286,141	57.1	56,866	67.7	53,964	170.8
Total (1925)	3,835,801	17.6	827,925	25.9	835,320	42.2
1926						
January	284,703	32.9	53,698	109.8	76,332	149.1
February	334,524	32.1	64,971	64.2	98,313	85.8
March	399,105	19.5	106,051	50.2	131,341	50.1
April	401,836	2.4	136,643	40.5	122,742	43.4
May	394,569	2.7	141,651	62.0	120,979	56.7
June	358,360	– 2.2	117,176	54.5	111,380	56.7
July	328,816	– 8.7	101,576	54.2	87,643	52.0
August	391,861	75.4	122,305	55.5	134,231	75.1
September	362,673	32.3	118,224	41.6	138,360	55.4

*Figures are revised from time to time by the U. S. Department of Commerce and the table here carries the latest revision.
**Minus (–) denotes decrease.

likewise a reflection of the more even keel found in the industrial situation which prevails during the current quarter. It may be fairly expected that retail trade during the remainder of the year will show an approximately normal seasonal movement, the secular trend being somewhat below what might be expected for the fourth quarter of 1926. The Fairchild's Apparel Analysis reports that retail trade for October shows a slight decline as compared with October 1925. The decline was reported to be due to unseasonable weather, the decline in the purchasing power of the South due to the fall in the price of cotton and partly in consideration of the unusual volume of sales in October 1925.

The value of sales of wholesale groceries in September was exactly equal to that in September 1925. The physical volume of sales showed a gain of 2 points above the physical volume for 1925. The fall in prices amounted to about 2 points as compared with 1925. This is a slightly better showing than was made in August if the usual seasonal trend be considered.

CHART XI

PASSENGER AUTOMOBILE PRODUCTION IN UNITED STATES AND CANADA, AND GENERAL MOTORS SALES

January 1925 to Date by Months

Sources: U. S.Department of Commerce
Commercial and Financial Chronicle

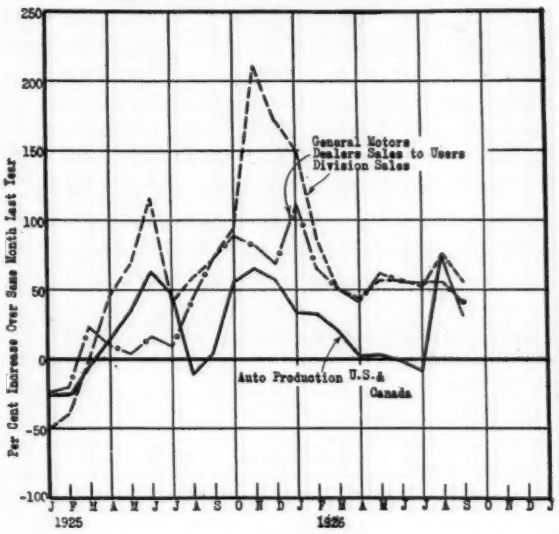


TABLE XII

VALUE OF CONTRACTS AWARDED IN 37 STATES EAST OF THE ROCKY MOUNTAINS FOR THE YEAR ENDING OCTOBER, 1926

(In Millions)

Source: F. W. Dodge Corporation

Month	Values	Per Cent Increase* Over Same Month of Previous Year
1925		
September	$566.5	58.7
October	530.2	25.7
November	474.8	21.7
December	528.9	55.8
1926		
January	457.2	47.7
February	389.9	25.4
March	597.9	21.8
April	570.6	.5
May	549.8	8.1
June	547.8	— 2.4
July	518.9	— 5.2
August	600.8	— 1.7
September	562.4	— .7
October	515.7	— 3.0

*Minus (—) indicates per cent decrease.

TABLE XI

AUTOMOBILE TRADE IN PHILADELPHIA FEDERAL RESERVE DISTRICT

(16 Distributors)

Source: Philadelphia Federal Reserve Business Review

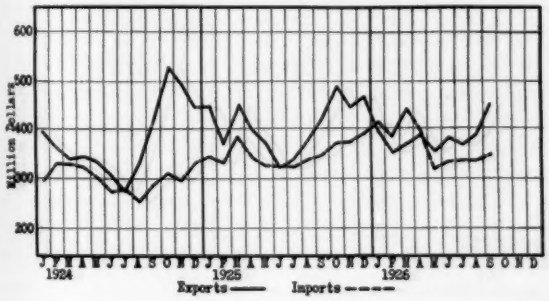
Classes of Cars	September 1926, change from			
	September, 1925		August, 1926	
	Number	Value	Number	Value
Sales, new cars, wholesale	+ 16.7%	+ 18.8%	+ 5.9%	+ 4.8%
Cars under $1,000	+ 3.4	+ 4.1	+ 18.9	+ 18.7
Cars $1,000 to $2,000	+ 88.8	+ 70.5	— 11.9	— 8.0
Cars over $2,000	— 2.6	— 1.1	+ 8.1	+ 9.3
Sales, new cars, at retail	+ 19.8	+ 17.9	+ 5.1	+ 6.6
Cars under $1,000	+ 26.6	+ 57.8	+ 5.3	+ 5.0
Cars $1,000 to $2,000	— 17.5	— 30.7	— 12.3	— 15.4
Cars over $2,000	— 19.0	— 26.2	+ 24.2	+ 27.2
Stocks of new cars	— 5.6	+ 0.3	+ 49.8	+ 30.8
Cars under $1,000	— 16.5	— 15.9	+ 88.8	+ 88.2
Cars $1,000 to $2,000	+ 19.2	— 1.7	+ 32.2	+ 28.3
Cars over $2,000	+ 42.6	+ 26.6	+ 3.8	+ 10.4
Sales of used cars	— 14.4	— 19.3	— 10.8	— 13.0
Stocks of used cars	+ 3.7	— 10.8	+ 7.0	+ 11.6
Retail sales, deferred payment	+ 15.5	+ 4.1	— 19.5	— 8.3

Foreign Trade

There was a good increase in volume of exports for September both above September 1925 and above August 1926. There was also a small increase in imports but the total volume was somewhat less than that for the same month of 1925. (See Table XIV and Chart XII.) The excess of exports was only about 5 million dollars. The United Kingdom shows an export trade less than one-half of the total of its imports. The excess of imports has been excessively large since the beginning of the coal strike and continues to represent an unhealthy situation for the trade of the United Kingdom.

British wholesale prices continued to show a slight increase in October. While wholesale prices also showed a slight increase in the United States for the same period, this increase was mainly due to the rise in the price of coal.

CHART XII
FOREIGN TRADE OF THE UNITED STATES
January 1924 to Date
Source: Federal Reserve Bulletin



The Agricultural Situation

Cotton continues to command major attention among the various farm commodities. The government report of November 8 indicates a further increase from the estimate of 16,627,000 bales, appearing in our October bulletin, to 17,918,000 bales. The price on October 8 of 12½ cents per pound indicates the low level attained in cotton quotations. Since that time the price has worked only slightly higher.

Wheat has been showing a series of declines since its more or less stable condition at our last writing and reports as of November 10 indicates still further declines, wheat prices breaking sharply in the last hour, on selling by northwest houses at the close of November 10. The price fell 1⅛ to 1½ cents lower than the preceding day's quotations. Corn has been weakening with wheat but stands as of this date practically unchanged over the preceding quotations. As indicated in the October issue of this bulletin the purchasing power of farm products has fallen considerably due to the severe drop in the price of cotton.

Various explanations have been offered for the rather dramatic slump in wheat prices, among which probably the most interesting is that which links the recent downward movement of wheat prices with influences of the English coal strike. It has been pointed out that the conclusion of this strike, leading to a resumption of output for exportation, would relieve not only the pressure on prices of manufactured commodities to farmers by relieving the drastic coal shortage, but would also relieve wheat supply congestion on this side of the Atlantic by the cheaper transportation provided for the movement of stores of wheat as returned

TABLE XIII
CONTRACTS AWARDED BY DISTRICTS IN THE UNITED STATES SHOWING PERCENTAGE INCREASE* OVER SAME PERIOD PRECEDING YEAR—JANUARY-OCTOBER 1926
(In Millions)
Source: F. W. Dodge Corporation

Month	New York State and Northern New Jersey		New England		Middle Atlantic States		Pittsburgh District		South-eastern States		The Central West		The Northwest		Texas	
	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase	Valuation	Per Cent Increase
1926																
Jan..	$195.5	76	$ 25.6	6	$ 34.6	59	$ 38.8	1	$ 65.8	60	$ 79.1	43	$ 4.0	−20	$ 13.8	5
Feb..	104.9	65	19.6	−19	27.2	−19	46.2	− 3	85.2	82	85.3	8	5.3	15	16.2	40
Mar..	157.6	88	34.6	− 1	68.8	6	87.0	−18	86.5	71	130.2	− 3	12.1	68	21.1	109
April.	171.0	29	44.3	11	56.7	− 5	61.8	−37	80.6	59	126.4	−20	11.4	25	18.4	−11
May .	139.9	24	47.3	2	58.0	11	64.0	5	59.0	−18	141.6	1	10.9	−13	29.1	129
June .	127.1	4	39.0	− 9	53.1	18	95.1	51	51.7	−30	146.6	−19	10.4	−17	24.8	22
July..	110.4	− 9	41.2	−29	48.6	1	76.2	−26	58.8	−33	154.4	54	11.8	31	17.6	− 3
Aug..	153.7	−27	44.6	− 9	61.5	19	63.5	−17	46.1	−33	196.0	57	8.6	11	26.8	24
Sept..	146.9	13	44.3	− 7	62.3	28	65.1	− 1	56.9	−33	160.0	0	9.1	− 4	17.8	− 2
Oct ..	123.6	−12	31.4	−19	56.9	11	58.3	−26	48.1	−37	171.3	35	9.8	41	16.4	53
Total.	$1,430.6	16	$371.9	− 9	$527.7	14	$656.0	−11	$638.7	− 2	$1,390.9	10	$93.4	11	$202.0	28

*Minus (−) indicates decrease.

cargoes on coal freighters. The cessation of coal exports from England has resulted in higher ocean freight rates on wheat. Since it has been the practice for British coal freighters to carry wheat as as return cargo this offers an explanation for the apparent discrepancies between the domestic and Liverpool wheat quotations.

While the condition precipitated by the bountiful cotton crop continues to be acute there is some encouragement in the effect of plentiful cotton in reducing the prices of manufactured commodities entering into farm consumption and also in the greater stimulus that will be given to the manufacture of cotton textiles in southern mills, with the consequent enlargement of employment. There is the usual discussion of plans for drastic curtailment of next year's crop; but unless means are devised for developing a greater diversification of crops among southern farmers they will continue to find themselves in much the same situation as mid-wester farmers who run wheat as their sole crop.

BUSINESS STATISTICS SECTION OF OHIO CONFERENCE OF STATISTICIANS CONDUCTS A SECTION OF THE MANAGEMENT WEEK PROGRAM

There was organized last April at Columbus an organization known as the Ohio Conference of Statisticians to appeal to all those in the state who are interested in satistical research. The officers are: E. O. Merchant, Dayton, President; Harry S. Will, Columbus, Vice-President; and Ralph J. Watkins, Columbus, Secretary-Treasurer. The constitution provides for the organization of special sections devoted to particular phases of statistical research. A Business Statistics Section has recently been formed under the chairmanship of Spurgeon Bell, Director of the Bureau of Business Research.

Arrangement was made with the Management Week Committee of the Ohio State University by which the program of the Business Statistics Section was adopted as a section of the Management Week Program. The meetings were held on the campus at Columbus, October 28, 1926.

The speakers at the morning session were C. O. Hardy of the Institute of Economics, Washington, and B. B. Smith of the White Motor Company, Cleveland. Mr. Hardy in his paper, "An Analysis of Some Current Methods of Forecasting the Trend of Business," gave a summary of his analysis of the methods of forecasting now in use by the various economic services as presented in his forthcoming volume on this subject.

The title of Mr. Smith's paper was "The Use of Interest Rates and Prices in Forecasting Business." Mr. Smith presented the technique involved and the results secured in his use of the methods of curlvilinear multiple correlation in forecasting the percentage of Blast Furnaces in operation twelve months ahead. Five independent variables were used in the study.

TABLE XIV

FOREIGN TRADE 1925-1926

Chief Industrial Nations

Sources: Federal Reserve Bulletin; Standard Statistics Company, Inc.

Month	United States (In Million Dollars)		United Kingdom (Thousand Pounds, Sterling)		France (Million Francs)		Germany (Million Gold Marks)		Japan (Million Yen)	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1925.....										
January...	446.4	346.2	69,051	128,907	3,563	3,173	697	1,372	147	228
February..	370.7	333.5	69,330	110,148	3,595	3,346	631	1,125	164	284
March....	453.7	385.4	70,303	112,681	3,762	3,307	712	1,111	151	313
April.....	398.3	346.1	60,877	110,358	3,557	3,051	672	1,081	168	258
May.....	370.9	327.5	64,204	104,278	3,640	2,969	732	1,084	170	204
June.....	323.3	325.2	58,893	110,982	3,507	2,991	688	1,072	181	201
July.....	339.7	325.6	64,826	98,745	3,484	3,034	747	1,180	211	171
August....	379.8	340.1	61,038	91,733	3,258	3,297	727	1,303	228	191
September.	420.4	350.0	60,735	97,925	3,850	4,317	780	1,104	233	164
October...	490.6	374.1	67,082	108,839	4,375	4,476	851	1,119	227	165
November.	447.0	376.0	60,977	114,693	4,193	4,574	797	894	213	184
December.	468.0	394.0	65,769	134,269	4,629	4,546	798	765	207	185
1926										
January...	397.2	416.8	60,380	117,689	3,868	4,483	801	733	166	205
February..	352.9	388.5	62,814	96,845	4,409	5,244	788	721	160	243
March....	374.4	443.1	66,400	106,864	4,960	5,095	927	687	188	287
April.....	387.9	397.9	52,749	102,492	4,353	5,020	782	729	161	235
May.....	356.6	321.0	45,764	81,199	4,461	4,390	731	707	161	220
June.....	338.0	337.0	50,107	97,504	4,671	5,181	761	796	156	193
July.....	369.0	338.0	57,260	100,290	5,244	5,016	823	949	161	184
August....	386.0	336.0	49,780	101,100	5,544	5,236	——	——	——	——
September.	450.0	345.0	50,680	101,700	——	——	——	——	——	——
Totals.....	3,412.0	3,323.3	495,934	905,683	37,510	39,665	5,613	5,322	1,153	1,567

The afternoon session was devoted to two papers concerning the forecasting of trade trends. Ralph J. Watkins of the Bureau of Business Research read a paper on the relationship between industrial employment and department store sales in Ohio. C. C. Morris of the Department of Mathematics of the Ohio State University discussed the mathematics involved in his work in forecasting wholesale trade in the United States.

The evening session was a dinner meeting at the Faculty Club on the campus and this meeting was open to all groups attending the Management Week sessions. Carl Snyder of the Federal Reserve Bank of New York presented a paper on "Recent Advance in Economic Science in the Study of Price Trends." Mr. Snyder presented the results of his study in the representation of the fluctuations in the volume of business and prices.

The papers presented at these meetings will be available in the "Proceedings of Management Week" to be published soon by the Bureau of Business Research.

TABLE XV
COMPARATIVE WHOLESALE PRICES FOR VARIOUS COMMODITY GROUPS—SEPTEMBER, 1926
Average Month 1913 Equals 100
Source: U. S. Department of Labor

Commodities	Sept. 1925	Aug. 1926	Sept. 1926	Month Trend
Farm Products	160.4	137.9	141.1	Higher
Food, etc.	160.2	150.8	152.0	Higher
Cloths & Clothing	189.3	174.7	175.2	Higher
Fuel & Lighting	169.3	179.5	182.0	Higher
Metal and met. products.	127.2	126.6	127.0	Higher
Building Materials	174.1	171.8	172.4	Higher
Chemicals, etc.	135.6	130.8	130.8	Unchanged
House-furnishing goods.	167.6	160.8	160.4	Lower
ALL COMMODITIES	159.7	149.2	150.5	Higher

THE DISTRIBUTION OF MORTGAGE LOANS IN OHIO

The figures below indicate that the Building and Loan associations of Ohio are the most important single agency in the state in the extension of mortgage loans. The insurance companies rank third. At the recent meeting of the Mortgage Bankers Association of America it was reported by the Assistant Secretary of the Prudential Life that 42 per cent of the assets of the National Insurance Companies were invested in mortgage loans.

TOTAL MORTGAGES OUTSTANDING IN OHIO

		Per Cent of Total
Building and Loan Associations. (as of June 30, 1925, from report of the state supt. of Building and Loan Associations.)*	$766,256,090.75	47
State, Private and National Banks. (as of June 30, 1925, report of the State Banking Department. Of this total 49 million plus is included for national banks.)	532,543,474.00	33
Insurance Companies (Local and National). (as of December 31, 1925. During the year 1925 new insurance loans to the amount of $68,036,297.52 were made in Ohio.)	230,980,184.34	14
Private Mortgage Companies. (duly incorporated lending institutions operating mainly in the second mortgage field, estimate December 31, 1925.)	100,000,000.00	6
Total	$1,629,779,749.09	100

The private companies' total is an estimate obtained from the records of the Ohio Mortgage Association. No attempt is made to include mortgages held by individuals or realtors. The figures given for private mortgage companies will be conservative, if these miscellaneous mortgages are assumed to be included in the figures.

The figures given for Ohio insurance loans have been taken direct from the insurance reports, through the courtesy of State Insurance Commissioner Conn, and include the mortgage loans in Ohio for all insurance companies, local, national, mutual, stock, foreign, etc. Much lower figures are given for Ohio insurance loans by the Bureau of the Census, taken from the Survey of Current Business, September, 1926.

The Census figures are compiled from the reports of 57 National Insurance Companies and therefore do not include many local Ohio companies. Their total for Ohio is $158,648,491.00, which is $72,331,693.34 less than the State Insurance Commissioner's corrected total of $230,980,184.34. The census figures are divided between farm and urban loans as follows:

	Number of Loans	*Amount of Loans*
Farm Loans	7,570	$ 46,511,633.00
Urban Property	9,160	112,136,858.00
Total	16,730	$158,648,491.00

The average insurance loan of December 31, 1925, is $9,484.00 and inquiry concerning the loans of several individual companies shows that its size is regularly decreasing, insurance loans being now obtainable in some cases in units as low as $2,000. This suggests the fact that the insurance company is entering more and more into the smaller unit loans which in the past have been handled almost entirely by the building and loan associations. This fact is further emphasized by the establishment of more agencies in Ohio cities and with authority to collect commissions for obtaining loans. These agents are aggressively advertising and soliciting for loans.

*The total mortgages outstanding of Building & Loan Associations as of June 30, 1926, is $844,078,147.55, an increase of $177,822,056.80 over the preceding year.

The figures cited make no attempt to include mortgage bonds issued on Ohio real estate.

LABOR FORCE REDUCTION IN TIME OF DEPRESSION

Among the outstanding papers presented before the autumn convention of the American Management Association held in Cleveland, Ohio, was that of Miss K. Huey, Personnel Director of the Eastman Kodak Company, Rochester, New York. Miss Huey pointed out that in our preoccupation with the reduction of labor turnover we have rather overlooked the need for careful consideration as to the merits and best methods for reducing labor force when such reduction becomes imperative. The bulk of her paper had to do, therefore, with the anticipation, amelioration, and administration of labor force reduction in a period of business decline.

Miss Huey set out with the presupposition that all controllable fluctuations in production needs for labor, —such as arise out of seasonal fluctuation, new competition, or temporarily overstocked market, — have been provided against. When the business decline is local to a single plant, industry, or locality, the correction of such unemployment will obviously be the transfer of surpluses of labor from areas of oversupply to areas of undersupply. Where the condition is one that is irreducible seasonally, the difficulty may be overcome within the plant by the development of "lateral integration"; that is, the setting up of additional lines of output which will dove-tail with the slack periods in the seasonal product. In some instances a lack of competent labor administration permits the laying off of help in one department at the same time that new help is being hired into other departments. The obvious remedy for such wasteful practices is the development of a centralized supervisory control of labor throughout the plant with a view of adjusting such difficulties in distribution by inter-departmental transfers.

Miss Huey called attention to the embarrassments which may arise from overemphasis of the merits of length of service. In periods of declining business when it is necessary to reduce the force, it not infrequently happens that employes expect to be retained on this basis alone. While length of service should be given its due weight, it was Miss Huey's feeling that the priority of lay-off should be determined upon some such rating plan as would assure tenure to the more valuable employes and which would automatically reinstate them in the same order. She described in considerable detail plans for rating employes with a view of determining priority for lay-offs.

The principle in setting up the schedule of credits was to prevent any good employe from being dismissed from lack of qualifications not really essential to good workmanship. At the same time the scores were arranged so as to prevent undesirable employes from retaining their positions at the expense of better workmen because of such less vital items as length of service, conduct, attendance, etc. Those who are interested in the mechanics of this procedure would do well to seek further information. Once the working personnel has been classified by this rating scheme it is necessary to have periodic follow-ups in order to keep these ratings fair and trustworthy. This is of especial importance in periods of impending decline. There are other obvious uses to which such a rating plan may be put and these were not wholly ignored.

When all has been done by transfer within the plant and exchange between associated plants, it may still be necessary to make a further reduction in labor force. It is then that this rating system justifies itself. Whether it is better to lay off employes or to ration out diminishing employment was discussed with considerable spirit by advocates of each of these alternatives. One may conclude that choice between them must depend pretty largely on the nature of the industry. In industries in which the machinery for scheduling and controlling production is elaborate, the greater frequency in stopping and starting, entailed by rationing employment, may become prohibitively expensive. On the other hand, there are industries in which the skill of operatives is so critical a matter that the company cannot very well afford, in the event of the recovery of their business, to have lost any of these valuable employes. There are, of course, humanitarian considerations which are strongly enlisted on the side of rationing out employment: the reluctance of foremen and others to cut off entirely employe income in hard times.

When it becomes necessary actually to reduce the number of employes, the Personnel or the Employment Department can render valuable service to both employer and employe by becoming a placement agency for laid off and discharged employes. The Personnel Department, by watching the help-wanted ads, keeping in intimate touch with public employment offices, and various trade association agencies, can help the amelioration of threatened unemployment very considerably.

We may conclude, in summing up, that there are three states in the administration of the labor force during a period of declining business:

1. Cutting out overtime and reducing standard working day (absorption).

2. Rationing out employment (attenuation).

3. Labor force reduction by lay-off and discharge (deletion). The major considerations in determining the priority of lay-offs may be listed in order of importance as follows:

1. Skill.
2. Versatility.
3. Dependence (married men laid off last).
4. Sex (married women laid off prior to men).
5. Age (old vs. young; unloading subnormals).

BOOK REVIEWS

H. K. Nixon: *An Investigation of Attention to Advertisements*

Lectures in Advertising, School of Business, Columbia University, Columbia University Press: 36 pp.

The practical business of advertising owes an immense debt to the theoretical studies of scientific psychologists. Most of these studies have been made in the laboratories of colleges and universities under conditions where the subjects were aware that some kind of an investigation was being made and that some record of reactions was being kept.

In the study "An Investigation of Attention to Advertisements" a different method has been used. It is a method developed in an attempt to measure the attention to advertisements given under normal every day conditions where a great number of subjects could be examined without their knowing that a scientific experiment was being made.

With the idea of getting a normal reaction, the author, Mr. H. K. Nixon, devised a recording apparatus and placed it in a shop window on a busy street in New York City where representatives of practically every class, race, and age continually passed. The somewhat complicated apparatus was so devised that the experimenter operating it could determine the relative attention — getting powers of two advertisements presented at the same time, determine the order of efficiency within a series of advertisements, determine the relative efficiency of such factors as color, illustration, type of appeal, size of headline, etc. By use of the same apparatus an investigation was made of the elements which would operate to make the public stop and look.

The discussion of the results of the investigation will be of most interest to the psychologist because of its test of a new method for measuring the attention value of advertisements. From the standpoint of the practical advertising man the results serve chiefly to verify those of previous experiments in attention value.

In the discussion of the general results of the investigation the following points are treated: the number and duration of fixations of attention; age, sex, and race difference in curiosity; the attracting of pedestrians by decoys; the attention value of color in advertising; the attention value of pictures of people.

Allen Bennet Forsberg: *Unemployment Insurance.*

Publishers, H. W. Wilson Company, 1926

There is probably no one man in the country better qualified to make a selection of articles on unemployment insurance than Mr. Forsberg. From the inception of the unemployment insurance movement in this country, Mr. Forsberg has been in the most intimate touch with all the conflicting schools of opinion having to do with this problem. Out of these unusual opportunities and out of the wealth of material collected under his supervision in connection with the Huber Bill in Wisconsin, he has gathered together a selection of articles covering the pros and cons of unemployment insurance.

The range of selection is not only fairly wide; it is admirably representative. The selected articles are ranged under affirmative and negative presentations. They are prefaced by a well-organized brief covering the various contentions leading up to the major and dependent issues involved in such a measure. Following this brief is a very generous and competently arranged bibliography. Mr. Forsberg himself contributes an author's preface which is admirably free from any such bias as might be expected in so controversial a subject. There are also sections in the text in which the editorial hand of Mr. Forsberg appears, but in all of them this deliberate abstinence from bias is apparent.

The general discussion is appropriately opened by the transcript of an address by Herbert Hoover before the President's Conference on Unemployment published from the Proceedings of the Conference. Among others who make valuable contributions to this introductory section of the text are Ethelbert Stewart, John R. Commons, Wm. M. Leiserson, and Robert F. Johnson. Most of these men are also drawn upon in subsequent sections of the text. There is perhaps a suspicious preponderance of the advocates of compulsory indurance in this introductory personnel.. It must be admitted, however, that the articles on "A Definition of Unemployment Insurance," "British Unemployment and Emergency Relief Measures," and "Unemployment Insurance Legislation" are impartially presented. There is also a helpful digest of the Huber Bill in this introductory section.

Chief among the supporters of unemployment insurance will be found such men listed as Leo Wolman, John R. Commons, Henry S. Dennison, John A. Ryan, and William Collins. One of the most complete and well organized of the presentations is that of Robert E. Johnson, reprinted from the Canadian Congress Journal. Most of the basic arguments for compulsory unemployment insurance will be found in the sections drawn from John R. Commons.

On the negative, the outstanding opponents are Frederick L. Hoffman and F. H. Clausen. Rather oddly there appear cited on the negative side of the discussion, Samuel Gompers and the "Marxian Communist View." This is the harder to reconcile with the supposed purpose of compulsory unemployment insurance because of the advocacy given to the Wisconsin Bill by such A. F. of L. officials as J. J. Handley and Henry J. Ohl.

There is a concluding section dealing with voluntary unemployment prevention and relief which should be of particular interest to all manufacturers, inasmuch as it deals with experiments made by such concerns as Procter & Gamble, the Dennison Tag Company, the Chicago Clothing Industry, and the Cleveland Garment Industry. All of these experiments, from the reports given by major executives, appear to have been successful. It would be interesting to make a study of these industries to see to what extent they have been regularized before voluntary unemployment insurance was provided.

The basic principle upon which unemployment insurance is advocated as a compulsory measure rests upon an avowed analogy with Wisconsin's successful industrial compensation law. The position taken by the designers of the Wisconsin compensation law, apparently vindicated by subsequent experience, was that the one way to stimulate manufacturers to a joint and competent attack upon the problem of reduction of industrial accident was to make industrial accident an unmistakable charge upon production. It was pointed out by the sponsors of the Huber Bill and like measures that in the same way the ingenuity of business executives would enable them to find the remedies of unemployment once unemployment becomes an inescapable charge upon industry.

It would seem that the most effective argument which might be brought against compulsory unemployment insurance and one which the affirmative seems to have inadequately set forth is that unemployment insurance is not in and of itself a curative measure. It can only stimulate the business organism to effect its own cure. Like all stimulants it may prove dangerous to the business organism in periods of depression. More could be done for the regularization of employment by the regularization of industry itself; and the regularization of industry depends upon a refinement of forecasting, scheduling, and controls, which we have not yet come near to achieving.

A careful reading of this text should bring home to every business executive problems of unemployment which, sooner or later, business men will have to face and solve. As a text for classroom instruction and for research workers, it should be extremely valuable. Our one suggestion is the addition of a carefully organized index; the absence of an index is, in this instance, a serious defect of the text.

PUBLICATIONS OF THE BUREAU OF BUSINESS RESEARCH

The publications of the Bureau of Business Research are of three types: (1) regular bulletins reporting results of studies conducted by the Bureau; (2) special bulletins presenting preliminary or informal reports of limited scope and of interest primarily to certain trade groups; (3) monthly bulletins dealing with current business conditions, both in general and in special fields.

Bulletins in the regular series, when available for general distribution, will be sent upon receipt of check. Bulletins in the special series will also be generally available, but in limited quantities and subject to withdrawal on exhaustion of the supply. The list below contains the numbers, titles, and prices of the bulletins so far published:

REGULAR SERIES

No.	*Title*	*Price*
R-1	Salesforce Compensation and Expense of Ohio Wholesale Grocers — Year 1924	$ .50
R-2	A Uniform System of Accounts for Retail Furniture Dealers (price to residents of Ohio, $1.00) regular price	5.00
R-3	Housewives' Buying Habits in Columbus, Ohio — Year 1924	.50
R-4	Salesforce Compensation and Expense in Retail Furniture Stores of the Ohio Valley — Year 1924	.50
R-5	The Ten-Payment-Plan of Retailing Men's Clothing	.50
R-6	The Construction Industry in Ohio	1.00

SPECIAL SERIES

X-1 Survey of Ohio Retail Dry Goods Advertising — Year 1924
X-2 Survey of Ohio Retail Clothing Advertising — Year 1924
X-3 Operating Results of Ohio Wholesale Grocers — Year 1923
X-4 Operating Results of Ohio Wholesale Grocers — Year 1924
X-5 Content of Advertising Courses in Colleges of Commerce — Agency Suggestions
X-6 Sales, Outstandings, and Advertising of Ohio Retail Dry Goods Dealers—Year 1925
X-7 Training for Retail Advertising
X-8 Operating Results of Ohio Wholesale Grocers — Year 1925

PROCEEDINGS OF MANAGEMENT WEEK, 1925

Office Management Section	$ .50
Production Section	.50
Marketing Section	.50
Accounting Section	.50
Proceedings of Management Week (all sections — cloth binding)	2.00

CONVENTION CALENDAR

November 17.....	New York City.....	American Railway Association. H. J. Forster, Secretary, 30 Vesey St., New York City.
November 18.....	Columbus, Ohio.....	The Ohio Millers State Association. Frank H. Tanner, Secretary, 205 Wilson Ave., Columbus, O.
November 18, 19.....	Chicago, Ill.....	American Management Association, Production Executives Division. W. J. Donald, Secretary, 20 Vesey Street, New York City.
December 3.....	Columbus, Ohio.....	The Ohio Contractors Association. C. H. Duncan, Secretary-Treasurer, 715 Hartman Building, Columbus, O.
December 9, 10, 11.....	New York City.....	Taylor Society. H. S. Person, Secretary, 29 West 39th Street, New York City.
December 10, 11.....	Cleveland, Ohio.....	Ohio Hotels Association. Robert O'Brien, Executive Secretary, Yuster Building, Columbus, Ohio.
January 4, 5, 6, 7.....	Chicago, Ill.....	National Shoe Retailers Association. Geo. M. Spangler, Manager, 224 South Michigan Avenue, Chicago, Ill.
January 12.....	Columbus, Ohio.....	Ohio Wool Growers Cooperative Association. J. F. Walker, Secretary, 199 E. Gay Street, Columbus, Ohio.
January 18, 20.....	Minneapolis, Minn.....	Northwestern Lumberman's Association. W. Badeaux, Secretary, Fawkes Bldg., Minneapolis, Minn.
January 21.....	Cincinnati, Ohio.....	The Cincinnati Boot & Shoe Manufacturers Association. Wm. H. Tateman, Secretary-Treasurer, Room 60 Duttenhofer Bldg., Cincinnati, Ohio.